



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW308C BS 1047      BYPASS RATIO: 4.1  
 UNIQUE ID NUMBER: 01P07PW146      PRESSURE RATIO ( $\pi_{00}$ ): 20.7  
 COMBUSTOR: Annular  
 ENGINE TYPE: MTF      RATED THRUST ( $F_{00}$ ) (kN): 31.2

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	15.9	109.8	48.1	8.3
AS % OF ORIGINAL LIMIT	81.1	93.1	59.1	25.5
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			73.9	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			74.9	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			75.5	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			80.1	

For non-volatile particulate matter (nvPM) emissions, please refer to the ICAO Engine nvPM Emissions Data Sheet.

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	0.367	0.09	0.81	18.45	4.8
CLIMB OUT	85	2.2	0.305	0.10	0.97	15.99	3.9
APPROACH	30	4.0	0.124	0.14	5.23	7.83	1.4
IDLE	7	26.0	0.045	5.94	42.30	3.63	1.3
LTO TOTAL FUEL (kg) or EMISSIONS (g)			155	425	3163	1414	-
NUMBER OF ENGINES				3	3	3	3
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				13.6	101.5	45.4	7.6
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)				12.5-15.2	99-105.9	45-45.92	5.3-9.4

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.9-100.7
TEMPERATURE (K)	296-301
ABS HUMIDITY (kg/kg)	0.0088-0.0122

### FUEL

SPEC	Jet A-1
H/C	1.85-1.86
AROM (%)	19.8-21.4

MANUFACTURER: Pratt & Whitney Canada  
 TEST ORGANIZATION: PW308 Development Engineering  
 TEST LOCATION: Mississauga, Ontario, Canada  
 TEST DATES: 07/08/2001-31/08/2001

### NO<sub>x</sub> REGULATION PARAGRAPH

	2.3.2 c) (CAEP/4)
x	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

### REMARKS

- P&WC ER 5080
- Engines E9633/01, E9631/07, CF0001/03
- Certification in accordance with Part III, Chapter 2, of Amendment 7 of ICAO Annex 16 Vol. II.
- NO<sub>x</sub> levels in accordance with Part III, Chapter 2, 2.3.2 d) (CAEP/6)

Compliance with Fuel Venting requirements: -

('x' if complies, 'PR' if pre-regulation, '-' if information is not available)